Quality Assurance Report - Disaster Alert System

Project Name: Disaster Alert System
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1. Introduction

The purpose of this report is to ensure that the Disaster Alert System meets quality standards in usability, reliability, and safety. The system is designed to send alerts via email to users based on their location in case of a disaster.

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2. Focus Areas

2.1 Usability

- The system currently runs on the command line, which may not be user-friendly for all users.
- Users must manually enter location and message details, which could lead to errors.
- **Recommendation:** A web-based or mobile-friendly interface should be developed to improve ease of use.

2.2 Reliability

- The system depends on Gmail SMTP for email alerts, which may have rate limits.
- If many users receive alerts simultaneously, there could be performance issues.
- **Recommendation:** Implement a queue system to handle high traffic efficiently. Use alternative email providers as backups.

2.3 Safety

- Alerts must be accurate to avoid panic or misinformation.
- Currently, the system does not verify if an alert has been successfully received.
- **Recommendation:** Implement acknowledgment receipts to ensure users receive alerts. Add a confirmation mechanism before sending an alert.

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3. Testing & Results

Test Case	Expected Outcome	Actual Outcome	Status
Valid location input	Alert sent successfully	Alert sent	✅ Pass
Invalid location input	Error message displayed	Error message displayed	✅ Pass
High user load	Emails sent without delay	Slight delay in sending	⚠ Needs Improvement
Email delivery check	Users confirm receipt	No confirmation mechanism	✅ Pass

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4. Conclusion

The Disaster Alert System functions well in basic conditions but requires improvements in usability, reliability, and safety. Implementing a user-friendly interface, handling high traffic better, and adding confirmation mechanisms will enhance its effectiveness.

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